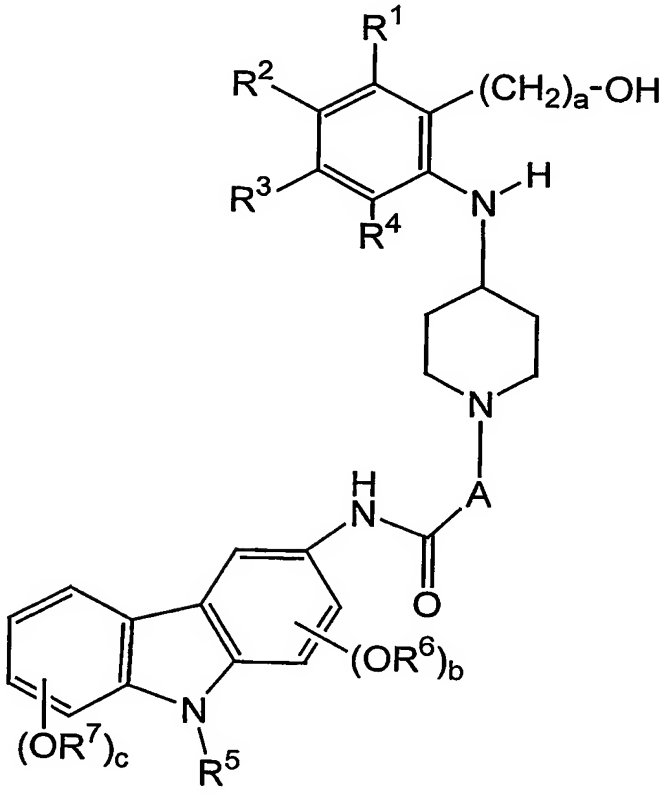
Claims:

1. 1,4-disubstituted piperidine compounds of general formula (I),



(I)

wherein

a represents 0, 1, 2, 3 or 4,

b represents 0, 1, 2 or 3,

c represents 0, 1, 2, 3 or 4,

R^1, R^2, R^3, R^4 are each independently selected from the group consisting of hydrogen; halogen; -CN; -NO_2; -OR^8; a linear or branched, saturated or unsaturated, optionally at least mono-substituted aliphatic radical; a saturated or unsaturated, optionally at least mono-substituted, optionally at least one heteroatom as ring member containing cycloaliphatic radical, which may be bonded via an alkylene group; or an optionally at least mono-substituted aryl- or heteroaryl radical, which may be bonded via an alkylene group and/or which may be condensed with an optionally at least mono-substituted, saturated or unsaturated mono- or bicyclic ring system,

R^5 represents hydrogen, a linear or branched, saturated or unsaturated, optionally at least mono-substituted aliphatic radical, or a saturated or unsaturated, optionally at least mono-substituted cycloaliphatic radical,

R^6, R^7 and R^8, identical or different, each represent hydrogen or a prodrug-moiety,

A represents a –CH_2- or –CH_2-CH_2- group,

optionally in form of one of its stereoisomers, preferably enantiomers or diastereomers, its racemate or in form of a mixture of at least two of its stereoisomers, preferably enantiomers or diastereomers, in any mixing ratio, or a salt, preferably a physiologically acceptable salt thereof, or a corresponding solvate, respectively.

2. Compounds according to claim 1, characterized in that R^1, R^2, R^3, R^4 are each independently selected from the group consisting of H; F; Cl; Br; -CN; -NO_2; -OR^8; a linear or branched, saturated or unsaturated, optionally at least mono-substituted C_{1-6}-aliphatic radical; a saturated or unsaturated, optionally at least mono-substituted, optionally at least one heteroatom as ring member containing C_{3-8}-cycloaliphatic radical, which may be bonded via a C_{1-3}-alkylene group; or an optionally at least mono-substituted aryl- or heteroaryl radical, which may be bonded via a C_{1-3}-alkylene group and/or which may be

condensed with an optionally at least mono-substituted, saturated or unsaturated mono- or bicyclic ring system,

R^5 represents hydrogen, a linear or branched, saturated or unsaturated, optionally at least mono-substituted C_{1-6}-aliphatic radical, or a saturated or unsaturated, optionally at least mono-substituted C_{3-8}-cycloaliphatic radical,

R^6, R^7 and R^8, identical or different, each represent hydrogen or a prodrug-moiety,

A represents a $-CH_2-$ or $-CH_2-CH_2-$ group.

3. Compounds according to claim 1 or 2, characterized in that R^1, R^2, R^3, R^4 are each independently selected from the group consisting of H; F; Cl; Br; -CN; $-NO_2$; $-OR^8$; a linear or branched, optionally at least mono-substituted C_{1-4}-alkyl radical, a saturated, optionally at least mono-substituted, optionally at least one heteroatom as ring member containing C_5- or C_6- cycloaliphatic radical, which may be bonded via an optionally at least mono-substituted C_1- or C_2-alkylene group;

preferably R^1, R^2, R^3, R^4 are each independently selected from the group consisting of H; F; Cl; Br; -CN; $-NO_2$; $-CH_3$; $-CH_2CH_3$; $-CHF_2$; $-CH_2F$; $-CF_3$; $-CF_2CF_3$; OR^8; cyclopentyl and cyclohexyl,

more preferably R^1, R^2, R^3, R^4 are each independently selected from the group consisting of H; F; Cl; Br, CH_3 and OR^8.

4. Compounds according to any one of claims 1 to 3, characterized in that R^5 represents H or a linear or branched C_{1-6} alkyl radical,

preferably R^5 represents H or an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl and tert-butyl.

5. Compounds according to any one of claims 1 to 4 characterized in that R^6, R^7 and R^8, identical or different, each represent H or a prodrug-moiety selected from the group consisting of

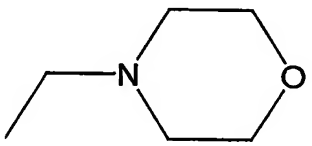
linear or branched C_{1-3}-alkyl,

a $P(=O)(OR^9)_2$ group, wherein R^9 represents a linear or branched C_{1-4}-alkyl radical,

a $-(C=O)-O-R^{10}$ group, wherein R^{10} represents a linear or branched C_{1-5}-alkyl radical,

a $-(C=O)-NH-R^{11}$ group, wherein R^{11} represents a phenyl group, which is mono-substituted with a linear or branched C_{1-3} alkyl radical,

a $-(C=O)-R^{12}$ group, wherein R^{12} represents a phenyl group, which is mono-substituted with a $-O-(C=O)-C_{1-3}$-alkyl radical, an $-CH_2-N(C_{1-4}\text{-alkyl})_2$ group or a



group.

6. Compounds according to claim 5, characterized in that R^6, R^7 and R^8, identical or different, each represent H or a prodrug-moiety selected from the group consisting of

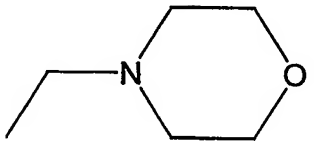
linear or branched alkyl selected from the group consisting of methyl, ethyl, n-propyl and iso-propyl,

a $P(=O)(OR^9)_2$ group, wherein R^9 represents methyl or ethyl,

a –(C=O)-O-R^{10} group, wherein R^{10} represents an alkyl radical selected from the group consisting of methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl and tert-butyl,

a -(C=O)-NH-R^{11} group, wherein R^{11} represents a phenyl group, which is mono-substituted with methyl or ethyl,

a –(C=O)-R^{12} group, wherein R^{12} represents a phenyl group, which is mono-substituted with –O-(C=O)-C_{1-3}-alkyl radical in the ortho position or with an –CH_2-N(C_{1-4}-alkyl)$_2$ in the meta or para position or with a



group

in the meta or para position.

7. Compounds according to any one of claims 1-6, characterized in that R^6, R^7 and R^8 each represent hydrogen.

8. Compounds according to any one of claims 1 to 7, characterized in that A represents a –CH_2- group.

9. Compounds according to any one of claims 1 to 8, characterized in that a represents 1, 2 or 3, preferably 1 or 2, more preferably 1.

10. Compounds according to any one of claims 1 to 9, characterized in that b represents 0, 1 or 2, preferably 0 or 1.

11. Compounds according to any one of claims 1 to 10, characterized in that c represents 0, 1 or 2, preferably 0 or 1.

12. Compounds according to any one of claims 1 to 11, characterized in that at least one of the substituents R^1, R^2, R^3 and R^4 represents –OR^8.

13. Compounds according to any one of claims 1 to 12, characterized in that one or two of the substituents R^1, R^2, R^3 and R^4 represent $-OR^8$.

14. Compounds according to any one of claims 1 to 13, characterized in that one or two of the substituents R^1, R^2, R^3 and R^4 represent $-OR^8$ and b and c each represent 0,

more peferably one of the substituents R^1, R^2, R^3 and R^4 represents $-OR^8$ and b and c each represent 0.

15. Compounds according to any one of claims 1-14 selected from the group consisting of:

[1] 2-[4-(3-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-methyl-9H-carbazol-3-yl)-acetamide,

[2] 2-[4-(4-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-methyl-9H-carbazol-3-yl)-acetamide,

[3] 2-[4-(5-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-methyl-9H-carbazol-3-yl)-acetamide,

[4] 2-[4-(6-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-methyl-9H-carbazol-3-yl)-acetamide,

[5] 2-[4-(3-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-ethyl-9H-carbazol-3-yl)-acetamide,

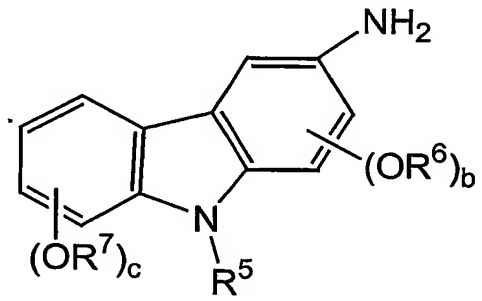
[6] 2-[4-(4-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-ethyl-9H-carbazol-3-yl)-acetamide,

[7] 2-[4-(5-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-ethyl-9H-carbazol-3-yl)-acetamide and

[8] 2-[4-(6-Hydroxy-2-hydroxymethyl-phenylamino)-piperidin-1-yl]-N-(9-ethyl-9H-carbazol-3-yl)-acetamide,

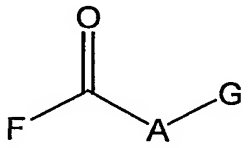
optionally in form of a salt, preferably a physiologically acceptable salt, more preferably in form of a physiologically acceptable acid addition salt, most preferably a hydrochloride salt, or a corresponding solvate.

16. Process for the preparation of 1,4-disubstituted piperidine compounds according to one or more of claims 1-15, characterized in that at least one compound of general formula (II),



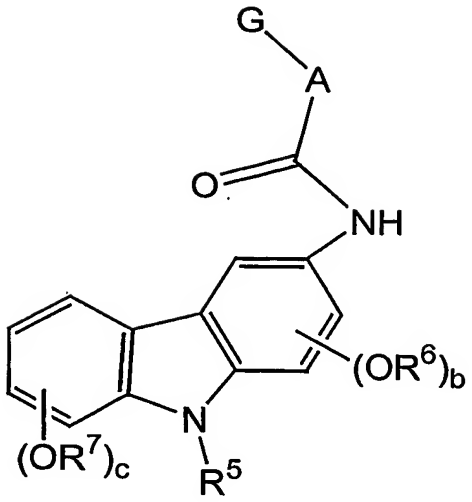
(II)

wherein R^5, R^6 and R^7, b and c have the meaning according to one or more of claims 1-15; is reacted with at least one compound of general formula (III),



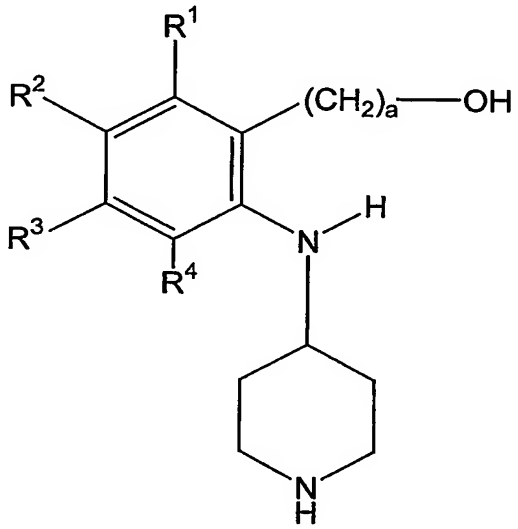
(III)

wherein A has the meaning according to one or more of claims 1-15, F represents halogen, preferably chlorine, hydroxy or an O-acyl group and G represents halogen, preferably chlorine, in a suitable reaction medium and preferably in the presence of at least one base and/or at least one auxiliary agent, and reacting the so obtained compound of general (IV)



(IV),

wherein A, G, R^5, R^6 and R^7, b and c have the above defined meaning, with at least one piperidine compound of general formula (V) and/or a salt, preferably hydrochloride, thereof,



(V),

wherein R^1 to R^4 and a have the meaning according to one or more of claims 1-15, in a suitable reaction medium, optionally in the presence of at least one base and/or at least one auxiliary agent.

17. Process for the preparation of a physiologically acceptable salt of the 1,4-disubstituted piperidine compounds according to claims 1-15, characterized in that at least one compound of general formula (I) is reacted with at least one acid, preferably an inorganic or organic acid, preferably in the presence of a suitable reaction medium.

18. Process for the preparation of a physiologically acceptable salt of the 1,4-disubstituted piperidine compounds according to claims 1-15, characterized in that at least one compound of general formula (I) having at least one acidic group is reacted with at least one base, preferably in the presence of a suitable reaction medium.

19. Medicament comprising at least one 1,4-disubstituted piperidine compound according to any one of claims 1-15 and optionally one or more pharmaceutically acceptable adjuvants.

20. Medicament according to claim 19 for the regulation of appetite, for the regulation of body weight, for the prophylaxis and/or treatment of disorders related to food ingestion, preferably selected from the group consisting of obesity, anorexia, cachexia, bulimia and/or diabetes (particularly type (II) diabetes).

21. Medicament according to claim 19 for the improvement of cognition (cognitive enhancement); for the prophylaxis and/or treatment of disorders of the peripheral nervous system; for the prophylaxis and/or treatment of disorders of the central nervous system; for the prophylaxis and/or treatment of arthritis; for the prophylaxis and/or treatment of epilepsy; for the prophylaxis and/or treatment of anxiety; for the prophylaxis and/or treatment of depression; for the prophylaxis and/or treatment of cognitive disorders, preferably memory disorders; for the prophylaxis and/or treatment of cardiovascular diseases; for

the prophylaxis and/or treatment of pain; for the prophylaxis and/or treatment of hypertensive syndrom; for the prophylaxis and/or treatment of inflammatory diseases; for the prophylaxis and/or treatment of immune diseases; for the prophylaxis and/or treatment of panic attacks and/or for the prophylaxis and/or treatment of bipolar disorders.

22. Use of at least one 1,4-disubstituted piperidine compound according to any one of claims 1-15 for the manufacture of a medicament for the regulation of appetite, for the regulation of body weight, for the prophylaxis and/or treatment of disorders related to food ingestion, preferably selected from the group consisting of obesity, anorexia, cachexia, bulimia and diabetes (particularly type (II) diabetes).

23. Use of at least one 1,4-disubstituted piperidine compound according to any one of claims 1-15 for the manufacture of a medicament for the improvement of cognition (cognitive enhancement); for the prophylaxis and/or treatment of disorders of the peripheral nervous system; for the prophylaxis and/or treatment of disorders of the central nervous system; for the prophylaxis and/or treatment of arthritis; for the prophylaxis and/or treatment of epilepsy; for the prophylaxis and/or treatment of anxiety; for the prophylaxis and/or treatment of depression; for the prophylaxis and/or treatment of cognitive disorders, preferably memory disorders; for the prophylaxis and/or treatment of cardiovascular diseases; for the prophylaxis and/or treatment of pain; for the prophylaxis and/or treatment of hypertensive syndrom; for the prophylaxis and/or treatment of inflammatory diseases; for the prophylaxis and/or treatment of immune diseases; for the prophylaxis and/or treatment of panic attacks and for the prophylaxis and/or treatment of bipolar disorders.